

## PATENT

## PENDING CLAIMS AS AMENDED

Please amend the claims as follows:

1. (currently amended) A method for scheduling data transmissions on a forward link in a communication network comprising at least one cell and at least one scheduled user, said method comprising the steps of :

determining a forward link capacity available for each of said at least one cell;

assigning an assigned transmission rate to each of said at least one scheduled user for data transmission on the forward link;

sending said assigned transmission rate to said at least one scheduled user; and

wherein said assigned transmission rate is based on said forward link capacity available for each of said at least one cell.

2. (original) The method of claim 1 wherein said determining step, said assigning step, and said sending step are repeated every K frames, wherein K is an integer greater than or equal to one.

3. (currently amended) A method for scheduling data transmissions on a forward link in a communication network comprising at least one cell and at least one scheduled user, said method comprising the steps of :

determining a forward link capacity available for each of said at least one cell;

assigning an assigned transmission rate to each of said at least one scheduled user;

sending said assigned transmission rate to said at least one scheduled user; and

wherein said assigned transmission rate is based on said forward link capacity available for each of said at least one cell. ~~The method of claim 1~~ wherein said assigning step further comprises the step of :

determining an active member set for each of said at least one scheduled user, said active member set containing at least one cell in communication with said scheduled user;

**PATENT**

wherein said assigned transmission rate is further based on said forward link capacity available for one or more of said at least one cell in said active member set.

4. (original) The method of claim 3 wherein said assigning step further comprises the step of :

receiving a queue size for each of said least one scheduled user, said queue size determinative of an amount of data to be transmitted to each of said at least one scheduled user; and

wherein said assigned transmission rate is further based on said queue size for each of said at least one scheduled user.

5. (original) The method of claim 4 wherein said assigning step further comprises the step of :

creating a priority list of scheduled users, said priority list containing each of said at least one scheduled user, wherein each of said least one scheduled user is assigned a priority; and

wherein said assigned transmission rate is further based on said priority of each of said at least one scheduled user.

6. (original) The method of claim 5 wherein said assigning step further comprises the steps of :

selecting a selected scheduled user from said priority list of scheduled users, said selected scheduled user having a highest priority among said at least one scheduled user in said priority list;

calculating a maximum supportable transmission rate for said selected scheduled user by one or more of said at least one cell in said active member set of said selected scheduled user;

selecting a minimum transmission rate from said maximum supportable transmission rates, said minimum transmission rate being defined as a maximum transmission rate; and

wherein said assigned transmission rate is at or below said maximum transmission rate.

## PATENT

7. (original) The method of claim 6 wherein said assigning step further comprises the step of :

recommending a preferred transmission rate, said preferred transmission rate being based on said queue size of said selected scheduled user; and

wherein said assigned transmission rate is at or below said preferred transmission rate.

8. (original) The method of claim 7 wherein said assigning step further comprises the steps of :

updating said forward link capacity available for one or more of said at least one cell in said active member set of said selected scheduled user to reflect a capacity allocated to said selected scheduled user; and

removing said selected scheduled user from said priority list.

9. (original) The method of claim 2 further comprising the step of :  
reassigning said assigned transmission rate of zero or more of said at least one scheduled user to a temporary transmission rate, wherein said temporary transmission rate is dependent on said forward link capacity available for each of said at least one cell.

10. (currently amended) A method for scheduling data transmissions on a forward link in a communication network comprising at least one cell and at least one scheduled user, said method comprising the steps of :

determining a forward link capacity available for each of said at least one cell;

assigning an assigned transmission rate to each of said at least one scheduled user;

sending said assigned transmission rate to said at least one scheduled user; and

wherein said assigned transmission rate is based on said forward link capacity available for each of said at least one cell, wherein said determining step, said assigning step, and said sending step are repeated every K frames, wherein K is an integer greater than or equal to one,

reassigning said assigned transmission rate of zero or more of said at least one scheduled user to a temporary transmission rate, wherein said temporary transmission rate is dependent on

**BEST AVAILABLE COPY**

Attorney Docket No.: PA382A1C1

Customer No.: 23696

## PATENT

said forward link capacity available for each of said at least one cell, The method of claim 9  
wherein said reassigning step further comprises the steps of :

creating a temporary cell list of affected cells from said at least one cell in the communication network, said affected cells having inadequate transmit power to transmit data to said at least one scheduled user.

11. (original) The method of claim 10 wherein said reassigning step further comprises the steps of :

creating a temporary priority list of affected scheduled users, said affected scheduled users comprising of said at least one scheduled user in the communication network.

12. (original) The method of claim 11 wherein said reassigning step further comprises the steps of :

selecting an affected scheduled user from said temporary priority list of affected scheduled users, said selected affected scheduled user having a highest priority among said at least one scheduled user in said temporary priority list;

calculating a maximum temporary supportable transmission rate for said selected affected scheduled user by one or more of said at least one cell in said active member set of said selected affected scheduled user;

selecting a minimum transmission rate from said maximum temporary supportable transmission rates, said minimum transmission rate being defined as a maximum temporary transmission rate; and

wherein said temporary transmission rate is at or below said maximum temporary transmission rate and said assigned transmission rate.

13. (original) The method of claim 12 wherein said reassigning step further comprises the steps of :

updating said forward link capacity available for one or more of said at least one cell in said active member set of said selected affected scheduled user to reflect a capacity allocated to said selected affected scheduled user; and

**PATENT**

removing said selected affected scheduled user from said priority list.

14 (canceled)

15. (previously presented) A method for a communication system, comprising:  
transmitting data over a primary and secondary code channels over a forward link;  
assigning at least one primary code channel for a duration of a communication to  
transmit unscheduled transmissions of data and control messages without a delay;  
assigning at least one secondary code channel for transmission of data at high rates;  
assigning said secondary code channels at each scheduling period and reassigned during  
the scheduling period according to an available capacity of said forward link.

16. (previously presented) The method as recited in claim 15, further comprising:  
grouping said least one secondary code channel into sets of secondary code channels,  
with each set defined by a unique grouping of secondary code channels.

17. (previously presented) The method as recited in claim 15, further comprising:  
scheduling high speed data transmissions by allocating communication resources via  
selecting a set of secondary code channels.

18. (previously presented) The method as recited in claim 16, further comprising:  
wherein at least one of said unique grouping of secondary code channels corresponds to  
an assigned transmission rate.

19. (previously presented) The method as recited in claim 15, further comprising:  
partitioning transmitted data into data frames and each data frame partitioned into data  
portions for transmission on the primary and secondary code channels.

**PATENT**

20. (previously presented) The method as recited in claim 19, further comprising: encoding and spreading said data portion into data frames of said primary and secondary code channels for transmission.
21. (previously presented) The method as recited in claim 15, further comprising: determining a demand for a transmit power level of the forward link, adding or dropping one or more secondary code channels to satisfy the demand for the transmit power level at each scheduling period.
22. (previously presented) The method as recited in claim 15, further comprising: receiving said primary and secondary code channels.
23. (previously presented) The method as recited in claim 15, further comprising: scheduling said primary and secondary code channels transmissions based on an amount of data to be transmitted.
24. (previously presented) The method as recited in claim 15, further comprising: scheduling transmission of small amounts of data on the primary code channel.
25. (previously presented) The method as recited in claim 15, further comprising: scheduling transmission of larger amounts of data on the secondary code channel.
26. (previously presented) The method as recited in claim 15, further comprising: scheduling high data rate transmission on the secondary code channel.
27. (previously presented) The method as recited in claim 15, further comprising: scheduling said primary and secondary code channels transmissions based on at least one a transmit energy-per-bit required by a user for a requisite level of performance, an amount of data to be transmitted, a type of data to be transmitted, a type of data service being provided to the user, an amount of delay already experienced by the user, and priority of the users.

Attorney Docket No.: PA382A1C1

Customer No.: 23696

**PATENT**

28. (previously presented) An apparatus for a communication system, comprising:  
a transmitter for transmitting data over a primary and secondary code channels over a forward link;

a controller for assigning at least one primary code channel for a duration of a communication to transmit unscheduled transmissions of data and control messages without a delay, for assigning at least one secondary code channel for transmission of data at high rates, and for assigning said secondary code channels at each scheduling period and reassigned during the scheduling period according to an available capacity of said forward link.

29. (previously presented) The apparatus as recited in claim 28, wherein said controller is for grouping said least one secondary code channel into sets of secondary code channels, with each set defined by a unique grouping of secondary code channels.

30. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling high speed data transmissions by allocating communication resources via selecting a set of secondary code channels.

31. (previously presented) The apparatus as recited in claim 29 wherein at least one of said unique grouping of secondary code channels corresponds to an assigned transmission rate.

32. (previously presented) The apparatus as recited in claim 28, wherein said controller is for partitioning transmitted data into data frames and each data frame partitioned into data portions for transmission on the primary and secondary code channels.

33. (previously presented) The apparatus as recited in claim 32, wherein said transmitter is for encoding and spreading said data portion into data frames of said primary and secondary code channels for transmission.

34. (previously presented) The apparatus as recited in claim 28, wherein said controller is for determining a demand for a transmit power level of the forward link, and

## PATENT

adding or dropping one or more secondary code channels to satisfy the demand for the transmit power level at each scheduling period.

35. (previously presented) The apparatus as recited in claim 28, further comprising: a receiver for receiving said primary and secondary code channels.

36. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling said primary and secondary code channels transmissions based on an amount of data to be transmitted.

37. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling transmission of small amounts of data on the primary code channel.

38. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling transmission of larger amounts of data on the secondary code channel.

39. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling high data rate transmission on the secondary code channel.

40. (previously presented) The apparatus as recited in claim 28, wherein said controller is for scheduling said primary and secondary code channels transmissions based on at least one a transmit energy-per-bit required by a user for a requisite level of performance, an amount of data to be transmitted, a type of data to be transmitted, a type of data service being provided to the user, an amount of delay already experienced by the user, and priority of the users.



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**